



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**REGION IX**

**75 Hawthorne Street**

**San Francisco, CA 94105-3901**

June 5, 2009

Terri Marceron  
Forest Supervisor  
Lake Tahoe Basin Management Unit  
35 College Drive  
South Lake Tahoe, CA 96150

Subject: Draft Environmental Impact Statement for South Shore Fuel Reduction  
and Healthy Forest Restoration, El Dorado County, CA.  
(CEQ# 20090101)

Dear Ms. Marceron:

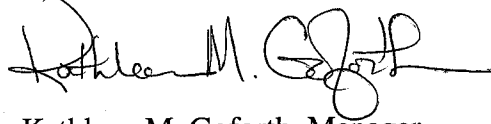
The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act. Our comments are provided in accordance with our May 15, 2009 agreement with Duncan Leao that we provide our comments no later than June 9, 2009. Our detailed comments are enclosed.

EPA commends the Forest Service and Lahontan Regional Water Quality Control Board (Lahontan RWQCB) for their efforts to address fuel loads and forest health in the wildland-urban intermix (WUI). We understand the urgency of getting fuel hazard reduction projects underway. We support this work and recognize the many challenges of conducting fuel reduction and forest restoration projects in the WUI. We also support the proposal to reduce conifer encroachment of meadows, riparian corridors, and aspen groves. Of note are the design measures and best management practices included in action alternatives to reduce adverse impacts and meet soil, watershed and water quality, and wildlife, fisheries, and aquatic habitat objectives. The intent of our comments is to ensure that this fuel reduction and forest restoration project is planned and implemented in a manner that is both effective and consistent with efforts to restore the historic clarity of Lake Tahoe, including the requirements of the forthcoming Total Maximum Daily Load for sediment/siltation in the Lake.

We have rated the DEIS as Environmental Concerns – Insufficient Information (EC-2) (see enclosed "*Summary of Rating Definitions*") due to our concerns regarding water quality monitoring, cumulative watershed effects, and impacts to stream environment zones (SEZs). In light of these concerns, we recommend the Forest Service and Lahontan RWQCB consider implementation of an alternative that reduces, to the maximum extent feasible, adverse effects on SEZs and watersheds already over the cumulative watershed effects threshold.

We appreciate the opportunity to review this DEIS. When the FEIS is released for public review, please send one hard copy and one CD ROM to the address above (mail code: CED-2). If you have any questions, please contact me at (415) 972-3521, or contact Laura Fujii, the lead reviewer for this project. Laura can be reached at (415) 972-3852 or [fujii.laura@epa.gov](mailto:fujii.laura@epa.gov).

Sincerely,



Kathleen M. Goforth, Manager  
Environmental Review Office  
Communities and Ecosystems Division

Enclosures:

Detailed Comments  
Summary of Rating Definitions

cc: Harold J. Singer, Lahontan Water Board  
Andrea Stanley, Lahontan Region, CA Regional Water Quality Control Board  
Joanne Marchetta, Tahoe Regional Planning Agency  
Steve Thompson, US Fish and Wildlife Service

**Water Quality Monitoring and Modeling**

***Implement systematic monitoring and modeling to characterize the water quality impacts of fuel hazard and forest restoration projects in Lake Tahoe Basin.*** EPA remains concerned with maintenance and improvement of water quality in Lake Tahoe, a federally designated Outstanding National Resource Water, which is listed as impaired for sediment/siltation. We understand the urgency of getting fuel hazard reduction projects underway; however, they should be implemented in such a way as to avoid unnecessary environmental harm that would threaten water quality. Furthermore, the forthcoming Lake Tahoe Total Maximum Daily Load (Lake Tahoe TMDL) will likely require a 12% reduction in sediment loads from Lake Tahoe Basin Management Unit (LTBMU) lands over the next 20 years.<sup>1</sup>

***Recommendations:***

We recommend that fuel hazard reduction and forest restoration projects in the Lake Tahoe Basin be subject to systematic monitoring and research, data collection, and analysis necessary to estimate fine sediment and nutrient load contributions to Lake Tahoe. For instance, as has been undertaken for other TMDL source categories, we recommend a concerted monitoring and modeling effort be undertaken by LTBMU to characterize both the impacts of this project (and others like it) and the benefits of implementing Best Management Practices (BMPs). Ideally, the modeling should inform optimum deployment of BMPs for this project and future projects. At a minimum, modeling should provide estimates of pollutant loads resulting from this project for 20 years, and could, therefore, be conducted during or following project implementation.

Modeling should be used to evaluate the tradeoffs between implementing BMPs and requiring increased load reduction efforts from other forest management projects and/or TMDL source categories. Whatever model is used or developed should be capable of providing clarity-reducing pollutant loading estimates to track TMDL implementation and inform future evaluations of--and, if necessary, revisions to--the Lake Tahoe TMDL load allocations and Implementation Plan.

***Implement more rigorous project-specific monitoring, including photo monitoring.***

Alternative 2 Proposed Action would allow mechanical equipment operations in stream environment zones (SEZs). Equipment operations would be limited to cut-to-length operations or operations using equipment that has been demonstrated to adequately protect soil and water resources (i.e., equipment that is lighter on the land, rubber-tired equipment, equipment that operates on a bed of slash, or other innovative technologies that reduce impacts to soils) (p. 2-6). Pile burning within the SEZs would also be allowed since Region 5 Forest Service research has demonstrated that it can be done without substantial negative effects (p. 3-97). We note that demonstration projects utilizing these

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<sup>1</sup> December 5, 2008 from California Regional Water Quality Control Board, Lahontan Region; to Terri Marceron, Forest Supervisor, Lake Tahoe Basin Management Unit.

innovative technologies within the SEZ have either only recently been completed (p. 3-81), or, in the case of pile burning, have yet to be undertaken within Lake Tahoe Basin. We remain concerned with the potential water quality effects of allowing such activities in the SEZ.

***Recommendations:***

We recommend implementation of rigorous project-specific monitoring, including photo monitoring before and after the project is implemented. Such monitoring should be sufficient to show where large trees that provided bank stability were removed, particularly in and on stream banks, and to show resulting skid trails and deep ruts in floodplains/SEZs where mechanized thinning took place. Pre- and post-project photo monitoring should also reveal the changes to shading conditions in streams and along their banks, as well as burn pile location, size, density, and post-burn conditions. Photo monitoring should be continued sufficiently long after project completion to show the rate of restoration of vegetation, bank stability, and general pre-project conditions.

The final environmental impact statement (FEIS) should also provide additional data to support the conclusion that mechanical thinning and pile burning in the SEZ will not result in adverse soil, sedimentation, erosion or water quality effects.

***Describe the rationale and criteria used to select the proposed primary triggers.*** The DEIS states that several triggers have been agreed to by the Lake Tahoe Basin Management Unit (LTBMU) and Lahontan Regional Water Quality Control Board (Lahontan RWQCB) in order to determine whether more detailed analysis, including site specific field evaluations, is needed to evaluate the potential impacts of the proposed treatments and identify design features needed to reduce those impacts and meet water quality requirements. These triggers are based on outcomes from the cumulative watershed effects (CWE) analysis for a given watershed. The primary triggers for additional monitoring requirements are: 1) an increase in risk ratio of 20% or more in watersheds currently below their threshold of concern for cumulative watershed effects (TOC), 2) an increase in Risk Ratio of 5% or more in watersheds that are currently over their TOC, and 3) an Equivalent Road Area (ERA) that increases above TOC due to project activities (p. 3-107).

***Recommendation:***

The FEIS should provide the rationale and criteria used to create the above primary triggers. For instance, describe the applicable water quality requirements and objectives to be achieved, the method used to determine if these requirements and objectives are met or not, and how remedial design features will be selected and implemented. We recommend the FEIS include specific data demonstrating that the above primary triggers, design features, and project-specific, as well as ambient, monitoring requirements, are sufficiently protective—in combination with other anticipated fuels reduction and forest management activities over the next 20 years—to ensure LTBMU meets the projected requirement for a 12%

reduction in sediment loads from their lands, pursuant to the forthcoming Lake Tahoe TMDL.

***Provide a more detailed analysis and consider additional BMPs for watersheds already over TOC with any increase in risk ratio.*** The action alternatives would result in some increased disturbance in the affected watersheds. Since the three watersheds that are over TOC based on existing conditions are not expected to experience an increase in risk ratio of 5% or more from project activities, the DEIS did not consider additional analysis, monitoring, or implementation of additional BMPs (p. 3-107). EPA supports considering a more detailed analysis and identification of BMPs to maintain existing sediment loads, especially in watersheds that are already over TOC.

***Recommendation:***

We recommend that the most affected watersheds, such as those already over the TOC with an increase in risk ratio, trigger a more detailed analysis and identification of BMPs to maintain existing sediment loads. For example, consider implementation of the TMDL Pollutant Reduction Opportunity (PRO) Report "Full BMPs",<sup>2</sup> in addition to implementing the design features described in Chapter 2. Full BMPs include tilling, mulching and constructing waterbars on all skid trails; and obliterating/recontouring (i.e., full functional restoration of) all landings and temporary roads. The PRO Report states: "This level of post-treatment BMPs is intended to restore hydrologic function in disturbed areas to levels that are equivalent or higher than undisturbed soil conditions." These forest management BMP definitions were used in the TMDL's Forested Uplands Source Category Group analyses and developed in close coordination with the LTBMU.

**Wildland-Urban Intermix**

***Provide a summary of related Community Wildfire Protection Plans and how they are consistent, complementary and fully integrated with the proposed project.*** The purpose and need for this project is to provide fire protection for the wildland-urban intermix. The Healthy Forest Restoration Act (HFRA) encourages development of Community Wildfire Protection Plans (CWPPs) under which communities designate their WUIs as well as the locations where fuel reduction projects may take place. The DEIS states that the Forest Service and Lahontan RWQCB worked closely with the surrounding communities to ensure project consistency with the CWPPs. However, the DEIS does not appear to provide a summary of the actions being taken by the communities and Forest Service to ensure fire protection efforts are consistent, complementary and fully integrated.

***Recommendations:***

The FEIS should include a summary of the CWPPs and describe actions being taken by the communities and Forest Service to ensure fire protection efforts are consistent, complementary and fully integrated. For instance, describe whether

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<sup>2</sup> (see

[http://www.swrcb.ca.gov/rwqcb6/water\\_issues/programs/tmdl/lake\\_tahoe/docs/presentations/pro\\_report\\_v2.pdf](http://www.swrcb.ca.gov/rwqcb6/water_issues/programs/tmdl/lake_tahoe/docs/presentations/pro_report_v2.pdf), pp. 184-185)

local housing and fire safety ordinances are consistent with the effort to reduce and minimize excessive fuels. We support the project component that would provide environmental education for the community as part of the South Shore Fuel Reduction and Healthy Forest Restoration Project (p. 2-23). We recommend this educational program include information on what homeowners and recreational visitors can do to protect their homes and recreational areas, and opportunities for public involvement in the future planning, design, and implementation of the proposed project.

**U.S. Environmental Protection Agency Rating System for  
Draft Environmental Impact Statements  
Definitions and Follow-Up Action\***

**Environmental Impact of the Action**

**LO – Lack of Objections**

The U.S. Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

**EC – Environmental Concerns**

EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

**EO – Environmental Objections**

EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

**EU – Environmentally Unsatisfactory**

EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

**Adequacy of the Impact Statement**

**Category 1 – Adequate**

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

**Category 2 – Insufficient Information**

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

**Category 3 – Inadequate**

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

\* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.